

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 13.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006769**Date Inspected:** 20-May-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 2100**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 530**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, Oregon

<b>CWI Name:</b>	Steve Barnett, Jon Nickolich, Mike CWI Present:			<b>Yes</b>	<b>No</b>	
<b>Inspected CWI report:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
				<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Bridge No:</b>	34-0006			<b>Component:</b>	Hinge K Pipe Beams	

**Summary of Items Observed:**

On this date, Caltrans Quality Assurance Inspector (QA) Sherri Brannon is present at the Oregon Iron Works, Inc. (OIW) jobsite in Clackamas, Oregon for the purpose of observing fabrication of the Hinge K Pipe Beams.

**OIW Fabrication Shop-Bay 3(sub-assembly):**

QA Inspector Brannon randomly observed OIW qualified welder Mikhail Bannikov ID#B28 welding joining hinge K pipe beam fuse half section MK#a124-2 (HPS 485W) to hinge K pipe beam fuse half section MK#a124-14 (HPS 485W) for fuse sub assembly section 120A-5. The complete joint penetration (CJP) weld is identified as weld joint #WM3-18. Mr. Bannikov was observed welding in the 1G (flat) position utilizing submerged arc welding (SAW) process with a 2.4mm diameter electrode, filler metal brand Lincoln Electric LA85 class F9A4-Eni5-G-H2. QA Inspector Brannon observed the OIW QC CWI Inspector's Mr. Steve Barnett and Mr. Jon Nickolich verifying that the pre-heat of 350°F and welding parameters were in accordance with the Welding Procedure Specification (WPS). Welding parameters measured by QA are as follows: 578 amps, 33.1 volts and a travel speed of 459 mm/min. Welding parameters observed/measured by QA Inspector Brannon appear to be in general compliance with the approved WPS 4020 revision number 0.

**OIW Fabrication Shop-Bay 3 (sub-assembly):**

QA Inspector Brannon randomly observed OIW qualified welder Mr. Liam Bui ID#B10 welding joining hinge K pipe beam gusset plates MK#a107 (HPS 485 W) to base plate MK#a110-4 (HPS 485 W) for hinge k pipe beam section 102A-4. The fillet weld is identified as weld joint #W2-04. Mr. Bui was observed welding in the 2F (horizontal) position utilizing submerged arc welding (SAW) process with a 2.4mm diameter electrode, filler metal brand Lincoln Electric LA85 class F9A4-Eni5-G-H2. QA Inspector Brannon observed the OIW QC CWI

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Inspector s Mr. Steve Barnett and Mr. Jon Nickolich verifying that the pre-heat and welding parameters were in accordance with the Welding Procedure Specification (WPS). Welding parameters measured/observed by QA are as follows: 500 amps, 32.9 volts and a travel speed of 463mm per minute appear to be in conformance with approved welding procedure specification WPS 4020 revision number 0. Weld joint W2-04 completed

OIW Fabrication Shop-Bay 3 (sub-assembly):

QA Inspector Brannon randomly observed OIW qualified welder Mr. Jayson Sinsel Heaton ID#S58 welding joining hinge K pipe beam gusset plates MK#b106 (HPS 485 W) to base plate MK#a110-4 (HPS 485 W) for hinge k pipe beam section 102A-4. The fillet weld is identified as weld joint #W2-03. Mr. Heaton was observed welding in the 2F (horizontal) position utilizing submerged arc welding (SAW) process with a 2.4mm diameter electrode, filler metal brand Lincoln Electric LA85 class F9A4-Eni5-G-H2. QA Inspector Brannon observed the OIW QC CWI Inspector Mr. Jon Nickolich verifying that the pre-heat and welding parameters were in accordance with the Welding Procedure Specification (WPS). Welding parameters measured/observed by QA are as follows: 500 amps, 32.9 volts and a travel speed of 463mm per minute appear to be in conformance with approved welding procedure specification WPS 4020 revision number 0. Weld joint W2-02 completed.

OIW Fabrication Shop-Bay 3(sub-assembly):

QA Inspector Brannon randomly observed OIW qualified welder Mr. Harold Baldonado ID #B33 welding joining hinge K pipe beam fuse half section MK#a124-2 (HPS 485W) to hinge K pipe beam fuse half section MK#a124-14 (HPS 485W) for fuse sub assembly section 120A-5. The complete joint penetration (CJP) weld is identified as weld joint #WM3-18. Mr. Baldonado was observed welding in the 1G (flat) position utilizing submerged arc welding (SAW) process with a 2.4mm diameter electrode, filler metal brand Lincoln Electric LA85 class F9A4-Eni5-G-H2. QA Inspector Brannon observed the OIW QC CWI Inspector's Mr. Jon Nickolich and Mr. Mike Gregson verifying that the pre-heat of 350°F and welding parameters were in accordance with the Welding Procedure Specification (WPS). Welding parameters measured by QA are as follows: 551 amps, 33.0 volts and a travel speed of 463 mm/min respectively. Welding parameters observed/measured by QA Inspector Brannon appear to be in general compliance with the approved WPS 4020 revision number 0.

OIW Fabrication Shop-Bay 3 (sub-assembly):

QA Inspector Brannon observed no production activity on Hinge K Pipe Beam sub assemblies noted below for the duration of the shift.

Hinge-K Pipe Beam Sub Assembly, MK#102A-1 - MK#a111-1 forging to MK#a110-1 base plate idle.

Hinge-K Pipe Beam Sub Assembly, MK#102A-4 - MK#a111-4 forging to MK#a110-4 base plate idle.

Note: QA Inspector Brannon also, observed pending critical welding repair (CWR-2244-003) at Mk#102A-1 weld joint W2-13.

Hinge-K Pipe Beam Sub Assembly, MK#120A-2 – MK#a124-3 half fuse to MK#a124-11 half fuse.

Note: Inspector Brannon also, observed pending 3rd time repair critical welding repairs (CWR-2244-005) at Mk#120A-2 weld joint WM3-18.

OIW Storage Yard

Hinge-K Pipe Beam Sub Assembly, MK#102A-2 - MK#a111-2 forging to MK#a110-2 base plate idle.

Hinge-K Pipe Beam Sub Assembly, MK#102A-3 - MK#a111-3 forging to MK#a110-3 base plate idle.

Note: QA Inspector Brannon also, observed pending repairs for MK#102A-2 weld joint W2-13 and MK#102A-3 weld joint W2-13 both have pending 1st time UT repairs.

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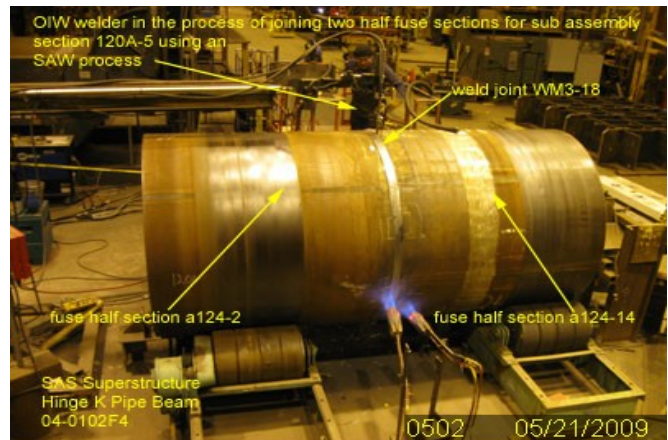
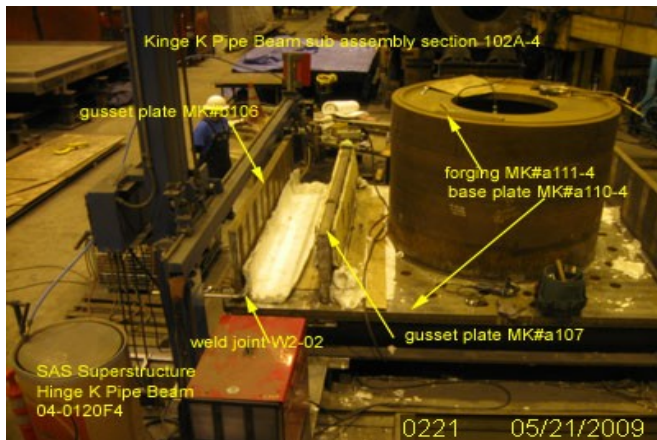
### Caltrans Status and Production Tracking:

QA Inspector Brannon also updated Caltrans status and production tracking logs for tracking of check samples, procedure qualification record (PQR), critical weld repairs (CWR), non-critical welding repairs (WRR), completed and in process welding, QC/QA non-destructive testing.

### Material, Equipment, and Labor Tracking:

QA Inspector Brannon performed a verification of personnel at OIW. QA Inspector Brannon observed 1 Supervisor, 1 Quality Control and 2 production personnel on this date.

The following digital photograph below illustrates observation of the activities being performed.



### Summary of Conversations:

As noted within this report.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

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**Inspected By:** Brannon, Sherri

Quality Assurance Inspector

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**Reviewed By:** Adame, Joe

QA Reviewer

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